UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,068	02/02/2004	Chia-Yi Liang	LIAN3021/EM	5513

23364 7590 03/22/2007	EXAMINER
BACON & THOMAS, PLLC	STEELMAN, MARY J

625 SLATERS LANE	ART UNIT	PAPER NUMBER
FOURTH FLOOR		
ALEXANDRIA, VA 22314	2191	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 February 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☒ All b)☐ Some * c)☐ None of:

  1.☒ Certified copies of the priority documents have been received.

  2.☐ Certified copies of the priority documents have been received in Application No. _____.

  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-20 are pending.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter. The systems of claims 1-20 lacks hardware to enable the

functionality.

Double Patenting

3.   The nonstatutory double patenting rejection is based on a judicially created doctrine

grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

improper timewise extension of the "right to exclude" granted by a patent and to prevent possible

harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection

is appropriate where the conflicting claims are not identical, but at least one examined

application claim is not patentably distinct from the reference claim(s) because the examined

application claim is either anticipated by, or would have been obvious over, the reference

claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re*

Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225

USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re*

Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163

USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may

be used to overcome an actual or provisional rejection based on a nonstatutory double patenting

ground provided the conflicting application or patent either is shown to be commonly owned

with this application, or claims an invention made as a result of activities undertaken within the

scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal

disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR

3.73(b).

4.   Claims 1-20 provisionally rejected on the ground of nonstatutory obviousness-type

double patenting as being unpatentable over claims 1-20 of copending Application No.

10982932. Although the conflicting claims are not identical, they are not patentably distinct

from each other because both sets of claims are directed towards setting states, generating

instructions, and paths for workflow management.

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting

claims have not in fact been patented.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6.   Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Smirnov et al.

Per claims 1 and 11:

A workflow defining system, comprising:

Col. 1: 44, workflows can be generated...first number of state nodes, second number of task nodes...generating a workflow...paths representing a result of applying one or more actions.

a state setting module, which at least sets a first terminal state, a second terminal state, and a third terminal state;

Col. 4: 55:, collection of state nodes 12 and task nodes 14..form a state transition graph task nodes 14 define processes or actions by which predecessor state nodes 12 are transformed to successor state nodes 12. See state nodes at col. 5: 51.

an instruction generating module, which generates a first instruction, a second instruction, and a third instruction for the first terminal state, the second terminal state, and the third terminal state, respectively;

Col. 4: 57, task nodes define processes or actions

a path generating module, which generates a first path, a second path, and a third path according to the first instruction, the second instruction, and the third instruction, wherein the first path, the

second path and the third path respectively points from the first instruction, the second

instruction and the third instruction to one of the first terminal state, the second terminal state

and the third terminal state.

Col. 5: 3, Paths are defined as complete routes to a final product and thereforemay be regarded as

workflows or production plans.

Per claims 2 and 12:

-data of the first terminal state are output from the first terminal state via the first path when the

first instruction is executed;

-data of the second terminal state are output from the second terminal state via the second path

when the second instruction is executed;

-data of the third terminal state are output from the third terminal state via the third path when

the third instruction is executed.

Col. 5: 56, During processing (executing) or a real world job in the manufacturing

environment...after an action associated with a node has been completed, all reules of the node

may be evaluated. If a rule is satisfied, the job may be passed to the successor node associated

with the rule...passed to multiple successor nodes (first, second, third terminal state output)

Per claims 3 and 14:

-each one of the first instruction, the second instruction and the third instruction could point from

the corresponding terminal state to at least two of the first terminal state, the second terminal

state and the third terminal state.

Col. 6: 21, task nodes are introduced into the model to represent significant steps in the

processing of materials in the manufacturing environment.

Col. 6: 56, inventory item or material defined by a particular state node may be produced by any

of the actions associated with any immediate predecessor task nodes. (instruction could point to

different states)

Per claims 4 and 13:

-the state setting module could further add a fourth terminal state; the instruction generating

module could further generate a fourth instruction for the fourth terminal state; and the path

generating module could further generate a fourth path according to the fourth instruction, the

fourth path pointing from the fourth instruction to at least one of the first terminal state, the

second terminal state, the third terminal state, and the fourth terminal state.

Col. 6: 17, State nodes may be chosen to represent any appropriate level of item or material or

process.

Per claims 5 and 15:

-the instruction generating module could further generate a fifth instruction for one of the first

terminal state, the second terminal state and the third terminal state, the path generating module

could further generate a fifth path according to the fifth instruction, and the fifth path points from

the fifth instruction to at least one of the first terminal state, the second terminal state and the

third terminal state.

Col. 6:17, Task nodes may be chosen to represent any appropriate level of item or material or

process.

Per claims 6 and 16:

-a path altering module, which could alter one of the first path, the second path and the third path

to point to another one of the first terminal state, the second terminal state and the third terminal

state.

Col. 7, 31, "alternative binding processes 30 and 32. Col. 8:37, 'alternate routes'

Per claims 7 and 17:

-a path altering module, which could alter one of the first path, the second path and the third path

to point to another two of the first terminal state, the second terminal state and the third terminal

state.

Col. 8: 42, scheduler perform route selection according to rules col. 8: 37, 'alternate routes'

Per claims 8 and 18:

-a path deleting module, which could delete at least one of the first path, the second path and the

third path.

Col. 10:26, Model may be continually updatd to accurately reflect the real workd manufacturing

environment...operators take breaks or a replaced with new workers and/or machines are rotated

in and out... (delete any of said paths)

Per claims 9 and 19:

-cooperates with at least one terminal device, wherein: the terminal device displays the first

terminal state, the second terminal state, the third terminal state, the first instruction, the second

instruction and the third instruction, so that at least one of the first instruction, the second

instruction and the third instruction is selected to be executed.

Col. 10: 51, Model 144 calls upon scheduler 148 to provide scheduling information (to execute

model). See FIG. 2, states and tasks (instructions)

Per claims 10 and 20:

-added data are input from the terminal device to at least one of the first terminal state, the

second terminal state, and the third terminal state.

See FIG. 6, input @ #142

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Mary Steelman, whose telephone number is (571) 272-3704. The

examiner can normally be reached Monday through Thursday, from 7:00 AM to 5:30 PM If

attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei

Zhen can be reached at (571) 272-3708. The fax phone number for the organization where this

application or proceeding is assigned: 571-273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mary Steelman

03/12/2007